

CLEAN COPY OF AMENDED CLAIMS 1, 3, 4, 6-8

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1. (Twice Amended) A wired circuit arrangement for the dynamic control of piezotranslators (2) with energy recovery by means of a single inductive intermediate store (1) which is connected in series with the piezotranslators (2) as well as by clocked switches, wherein for achieving a predetermined linear voltage characteristic at the piezotranslator (2), a secondary circuit is designed as a half-bridge consisting of the clocked switches (3, 4) having an output, respectively, wherein the inductive intermediate store (1) is connected to the output of the clocked switches, respectively, and connected in series with the piezotranslator (2), with the clocked switches (3, 4) connected to an upper supply voltage or a lower supply voltage and being externally controlled and operated at a high cycle or switching frequency in such a manner that the intermediate store is alternately connected with the upper or lower supply voltage ((UB/2) at the most, with the series connection of piezotranslator (2) and inductive intermediate store (1) carrying a superimposed bridge direct current; wherein the clocked switches (3, 4) are formed as MOS transistors (9), with an external diode (10) being connected in series with the clearance between contacts, and this series connection being bridged by a commutating diode (11) which is oppositely poled to the diode (10).

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3. (Twice Amended) The circuit arrangement according to claim 1, comprising a current sensor (12) connected to a first controller (13) and a final stage (18) connected to the first controller (13), wherein the current sensor (12) for generating a control voltage which is proportional to the output current of the final stage (18) is connected in the circuit arrangement of

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cancel* the piezotranslator (2) for controlling the circuit arrangement, with the control voltage being connected with a first input of the first controller (13), wherein a second input of the first controller (13) is connected to an output of a second controller (14), at whose two inputs a predetermined reference variable according to the physical position of the piezotranslator (2) and an actual value which is proportional to the output voltage of the final stage (18) are applied.

4. (Twice Amended) The circuit arrangement according to claim 3, wherein a third controller (19) is provided for a positioning control, having a first input receiving the reference variable of the physical position of the piezotranslator (2) and having a second input connected to a sensor (20) detecting a mechanical actual value, with the output of the third controller (19) being connected with one of the inputs of the second controller (14).

C3 6. (Amended) A wired circuit arrangement for the dynamic control of ceramic solid-state actuators in the form of piezotranslators with energy recovery by means of a single inductive intermediate store, which is connected in series with the piezotranslator, as well as by clocked switches arranged in a half-bridge, wherein, for achieving a predetermined linear voltage characteristic at the piezotranslator, a current control comprising a current sensor connected to the clocked switches and controlling the clocked switches of the half-bridge at a high clock or switching frequency and wherein a position control is superimposed on the current control.

7. (Amended) The circuit arrangement according to claim 6, wherein the intermediate store is connected in close proximity to the piezotranslator.

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amended.

8. (Amended) The circuit arrangement according to claim 6, wherein, for controlling the arrangement, the current sensor is arranged in a secondary circuit of the piezotranslator for determining a control voltage that is proportional to an output voltage of a final stage, wherein the current sensor (12) is connected to a first controller (13) and a final stage 18 is connected to the first controller (13), wherein the control voltage is supplied to a first input of the first controller, wherein a second input of the first controller is connected to an output of a second controller having two inputs supplied with a predetermined reference variable according to the physical position of the piezotranslator and with an actual value which is proportional to the output voltage of the final stage.
